



Dart Aerospace Ltd.  
1270 Aberdeen St  
Hawkesbury, ON  
K6A 1K7  
Canada

Tel (613) 632-5200  
Fax 613 632-5246

**U/R**

**D5809-3**

**Job Sheet 207538**



**POSITIVE RECALL**

POSITIVE  
RECALL

*MAR 5/20*

**Part No:** D5809-3

**Job Qty:** 4 pcs

**EFFECTIVE** \_\_\_\_\_ **AUTH** \_\_\_\_\_

**Part Name:** Front Rim

**RELEASED** \_\_\_\_\_ **DATE** \_\_\_\_\_



**Part Weight:** 0 lbs

**Status:** New

**Priority:** Medium

**Job Created:** 2/27/20

**Job Tracking No:**

**Created By:** Jennifer Renwick

**Due Date:** 3/27/20

**Type:** Stock

**Description:**

**Note:** URF 2020-525 DWG D5809 Rev.A IPP Rev. A 2020.01.30 New issue DP Verify DD

**Ship Via:**

### Bill of Materials

### Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup Hrs	Run Hrs	Workcenter / Supplier	Lead Time	
100	Large Fab - Basket - 1	4 pcs	3/27/20		0.00	1.00	Large Fab - 1		
							Large Fab - 10		
							Large Fab - 2		
							Large Fab - 3		
							Large Fab - 4		
							Large Fab - 5		
							Large Fab - 6		
							Large Fab - 7		
							Large Fab - 8		
							Large Fab - 9		
							Large Fab - 11 (Various)		<i>MAC</i>
							Large Fab - 12		
110	QC 5	4 pcs	3/27/20		0.00	0.00	QC 5 - 10		
							QC 5 - 12		
							QC 5 - 17		
							QC 5 - 18		
							QC 5 - 19		
							QC 5 - 22		
							QC 5 - 24		
							QC 5 - 3		
							QC 5 - 43		
							QC 5 - 49		
							QC 5 - 51		
							QC 5 - 58		
							QC 5 - 68		
							QC 5 - 9		
							QC 5 - 50		
							QC 5 - 30		
							QC 5 - 40		
							QC 5 - 61		
							QC 5 - 81		



**Container No:** S261483



**Part:** D5809-3

**Job No:** 207538

**Serial No/Batch:** S261483

**Revision:** A

**Inspector:**

**Exp Date:**

**Instructions:**

Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
CANADA  
TEL.: 1 613 632-5200  
Email: sales@dartaero.com  
www.dartaerospace.com

Date: 03/06/20

**DAS**  
**40**  
**9-89**

*MAR 10 2020*

Plex 3/5/20 7:17 AM Dart.lajeunesse.marie



120 Packaging 3-1 - Stock - B4B 4 pcs

3/27/20

0.00 0.00

Packaging 3 - 1 - B4B

Packaging 3 - 2 - B4B

Packaging 3 - 3 - B4B

Packaging 3 - 4 - B4B

Packaging 3 - 5 - B4B

Packaging 3 - 6 - B4B

Packaging 3 - 7 - B4B

Packaging 3 - 8 - B4B

Packaging 3 - 9 - B4B

Packaging 3 - 10 - B4B

Packaging 3 - 11 - B4B

Packaging 3 - 12 - B4B

Packaging 3 - 13 - B4B

Packaging 3 - 14 - B4B

Packaging 3 - 15 - B4B

Packaging 3 - 16 - B4B

Packaging 3 - 17 - B4B

Packaging 3 - 18 - B4B

Packaging 3 - 19 - B4B

Packaging 3 - 20 - B4B

Packaging 3 - 21 - B4B

Packaging 3 - 22 - B4B

Packaging 3 - 23 - B4B

Packaging 3 - 24 - B4B

Packaging 3 - 25 - B4B

Packaging 3 - 26 - B4B

Packaging 3 - 27 - B4B

Packaging 3 - 28 - B4B

Packaging 3 - 29 - B4B

Packaging 3 - 30 - B4B

Packaging 3 - 31 - B4B

Packaging 3 - 32 - B4B

Packaging 3 - 33 - B4B

Packaging 3 - 34 - B4B

Packaging 3 - 35 - B4B

Packaging 3 - 36 - B4B

Packaging 3 - 37 - B4B

DAS

130 QC 21 - SA

4 pcs

3/27/20

0.00 0.00

QC 21 - SA - 21

QC 21 - SA - 70

QC 21 - SA - 53

DAS

21

DAS

MAR 10 2020

Part Op 100 - 1- Cut and drill stringer as per dwg 2- Deburr  
 Descriptions: 110 - QC5- Inspect part completeness to step on W/O  
 120 - Identify as per dwg & Stock Location: \_\_\_\_\_  
 130 - QC21- Final Inspection - Work Order Release

## Job BOM

Part / Item	Component Name	Quantity	Operation	Container
M4130NTS0.750W.035	4130 Square Tube 0.750 X 0.035W	31.2000 ft (7.8 ea)	100-Large Fab - Basket - 1	5250 794

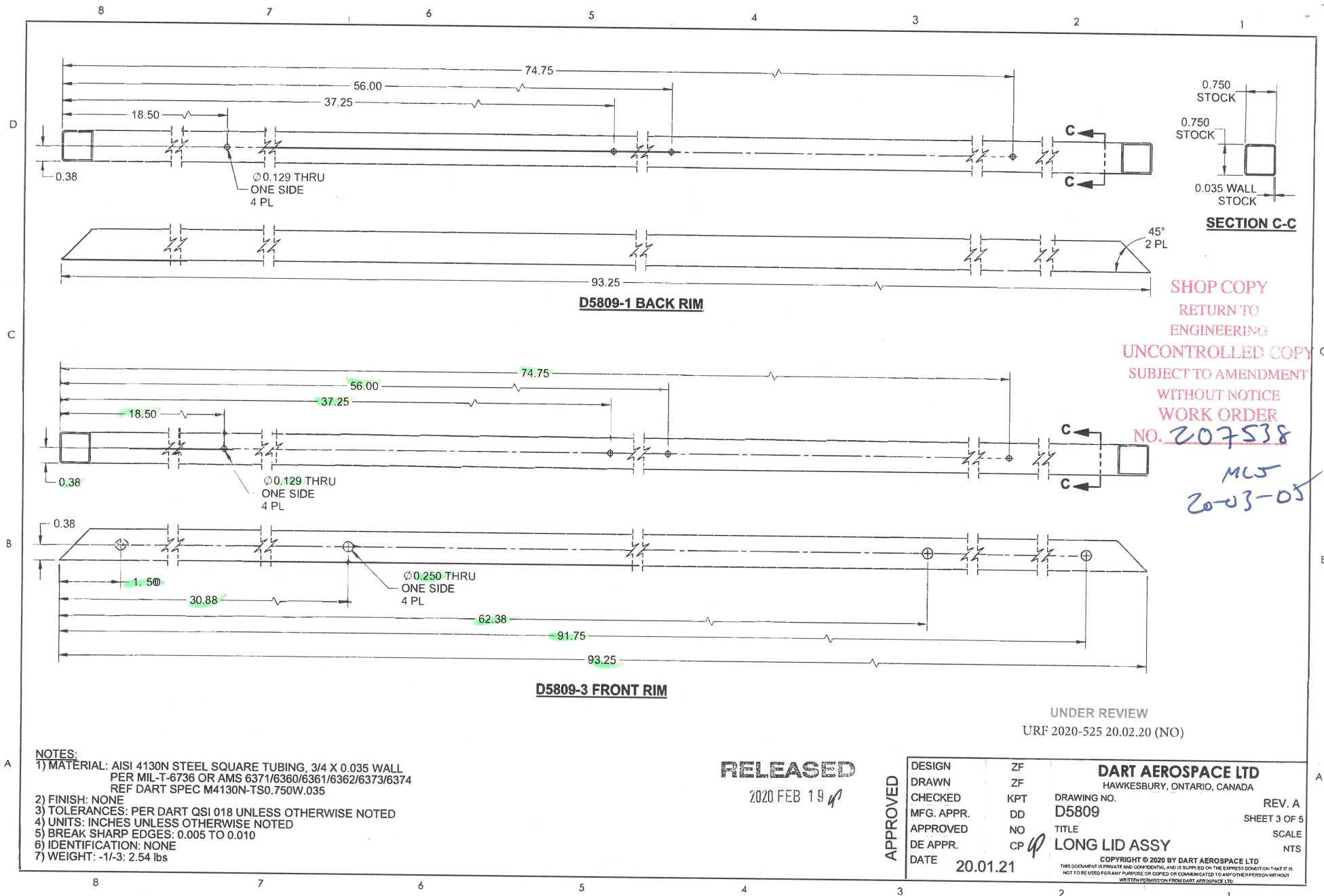
## Job Allocations

Operation	Component Part	Required	Inventory	Allocated
100-Large Fab - Basket - 1	M4130NTS0.750W.035	31	448	0

## Part Specifications

Specifications could not be found.





DART AEROSPACE LTD		Work Order:	207538
Description: Front Rim		Part Number:	D5809-3
Inspection Dwg: D5809-3	Rev: 1A		Page 1 of 1

# INSPECTION SHEET

[illegible]

Measured by:	<i>WAL</i>	Checked by:	<b>40</b> <b>9-89</b>	QC Inspector:	
Date:	<i>6 May 2020</i>	Date:	<i>MAY 10 2020</i>	Date:	

<b>Engineering Approval:</b> (If necessary)		<b>Date:</b>	
--	--	--------------	--

Rev	Date	Change	Revised by	Approved
A	14.07.31	New Issue	KJ	





Dart Aerospace Ltd.  
1270 Aberdeen St  
Hawkesbury, ON  
K6A 1K7  
Canada

Tel (613) 632-5200

# PURCHASE ORDER

## POHB045594



**Supplier:** FAC001-VU  
Factory Steel  
14020 Oakland Ave.  
Detroit, MI 48203 USA  
Phone: 313 883 6300  
Fax: 313 883 4883

**PO No:** POHB045594

**PO Date:** 1/16/20

**Due Date:** 2/4/20

**Purchase Order**

**Revision:**

**Revision Date:**

**Ship-To Contact:** Phone:

**Ship To:** 1270 Aberdeen Street  
Hawkesbury  
ON  
K6A 1K7 Canada  
Phone: 613-632-5200

**Via:** Ground

**Pynt Terms:** Net 30

**Freight Terms:**

**Special Comments:**

E-MAILED  
JAN 16 2020

Items													
Line Item	Job	Part	Drawing	Supplier Part No	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (USD)	Extended Price
1		M4130NTS0.750W.035			4130 Square Tube 0.750 X 0.035W : MATERIAL: AISI 4130N STEEL SQUARE TUBING PER ONE OF THE FOLLOWING SPEC'S: MIL-T-6736, AMS 6371, 6390, 6361, 6362, 6373 OR 6374	Firmed	-	2/4/20	600 ft	0 ft	600 ft	\$7.25/ft	\$4,350.00
										609 ft 609			
2		M4130NTS1.000W.065			4130 Square Tube 1.000" X 1.000" X 0.065"W : MATERIAL: AISI 4130N STEEL SQUARE TUBING PER ONE OF THE FOLLOWING SPEC'S: MIL-T-6736, AMS 6371, 6390, 6361, 6362, 6373 OR 6374	Firmed	-	2/4/20	160 ft	0 ft	160 ft	\$11.70/ft	\$1,872.00
										171 ft 609			
Grand Total:												\$6,222.00	





Dart Aerospace Ltd.  
1270 Aberdeen St  
Hawkesbury, ON  
K6A 1K7  
Canada

Tel (613) 632-5200

# PURCHASE ORDER

## POHB045594



### Order Notes

#### Procurement Quality Clauses

A005 right of entry

A012 chemical and physical test report

A016 personnel qualification

A017 raw material identification (as applicable). No Raw Metals from China or Soviet Bloc Countries. (DFARS)

A026 certification of material conformance

A041 quality management system

A042 dart notification by supplier

A043 retention of quality documents

A048 counterfeit parts avoidance, detection, mitigation and disposition program.

A049 supplier awareness.

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit [www.dartaerospace.com](http://www.dartaerospace.com) for further explanation.

Plex 1/16/20 11:38 AM Dart.Lavoie.Chantal



LIVE 1  
M4130NTS 0.750W.035

S250794

616506



DESIGN PH	DRAWN BY PH	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
CHECKED #	APPROVED #	DRAWING NO. M4130N-TS	REV. A SHEET 1 OF 1
DATE 05.02.09		TITLE 4130N SQUARE TUBING	SCALE NTS
A	05.02.09	NEW ISSUE	

PURCHASE MATERIAL:

AISI4130N STEEL SQUARE TUBING PER ONE OF  
THE FOLLOWING SPEC'S: MIL-T-6736, AMS 6371,  
6360, 6361, 6362, 6373 OR 6374

DAS  
82  
9-89

PART NUMBER:

M4130N-TS | A.AAA | W | .TTT |

WHERE    A.AAA    =    WIDTH IN INCHES  
          TTT       =    WALL THICKNESS IN INCHES

EXAMPLE: 0.50" X 0.035" WALL    =    M4130N-TS0.500W.035

RELEASED  
05 03 15 #

Copyright © 2005 by DART AEROSPACE LTD

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.





**PLYMOUTH TUBE CO.**

1200 East 12th Street, Streator, Illinois 61364  
Phone: (815) 673-1515 Fax: (815) 672-7343

**TRUST YOUR SOURCE! ACCEPT NO SUBSTITUTIONS!**



## PRODUCT CERTIFICATION

SALES ORDER - LINE / RLS

175629 - 1 / 0

SHIP TO

Factory Steel & Metal Supply C  
14020 Oakland Avenue  
Detroit, MI 48203  
USA

WORK ORDER 023679

PCS/HEAT 0

HEAT NUMBER 616506

MELT SOURCE Benteler Steel & Tube-Germany

CUSTOMER P.O.	CUSTOMER PART	QUANTITY	LADING NO	CERT ID / REV	CERT DATE								
3887	SQ-N34035			/									
<b>PART DESCRIPTION</b> SHSQ0750035J300 ***** Square OD ***** Side1: 0.7500 Max:0.7600 Min:0.7400 Side2: 0.7500 Max:0.7600 Min:0.7400 Wall: 0.0350 Max:0.0380 Min:0.0320 Length: 19.00/26.00 Spec: Mil-T 6736B Seamless Aircraft Grade: 4130 Anneal: Cond N													
<b>CERTIFICATION REQUIREMENTS</b> FAR BAA (FAR 52.225-1 Buy America Act Supplies). DFARS 252.225-7001 By America Act & Bal. of Payments Program FAR TAA (FAR 52.225-5 Trade Agreements)(Paragraph 1,3,4,5)This material was Eddy Current tested and conforms to the requirements of ASTM A-450. The Grain size is determined and reported by the raw material supplier in accordance to ASTM E-112. This raw material was magnetic particle inspected by the raw material supplier in accordance to AMS 2640J and/or ASTM E-1444, and rated as Frequency, and Severity to AMS 2301, latest revision. Yield is determined by using the 0.2% offset method. Additional Specifications - AMS-T 6736B, 6360P & 6371L. Material produced in accordance to ASTM A-519-17 and MIL-T 6736B. This material meets Plymouth ProMoly specifications. Jominy results: J(5/16")=45 J(8/16")=38													
<b>Chemical Analysis</b>													
C	Mn	P	S	Si	Al	Cr	Mo	Ni	Pb	Cu	V	Ti	Sn
.310	.55	.011	.002	.230	.036	.87	.18	.12	.001	.16	.002	.002	.010
<b>Physical Properties</b>													
Freq.	Severity	Grain Size											
.020	.015	9											
<b>Mechanical Properties</b>													
<b>TEST</b>	<b>UNITS</b>	<b>#TESTS</b>	<b>HIGH</b>	<b>LOW</b>	<b>AVERAGE</b>	<b>STD-DEV</b>							
Tensile	Psi	6	126660	125480	126065	482							
Yield	Psi	6	120930	119880	120387	374							
Elongation	%	6	21	20	20	1							
Rockwell C	Rc	6	25	25	25	0							
<b>TEST</b>	<b>RESULT</b>												
Decarb/OD	Pass												
Total ID/OD decarb	Pass												

I certify that the results are a true and correct copy of the records prepared and maintained by Plymouth Tube Company, Streator in compliance with the requirements of the cited specification. Chemistry is as reported by the Steel supplier. This test report cannot be reproduced or distributed except in full without the written permission of Plymouth Tube.

*Janine Derossuff*  
Quality Assurance



1



**PLYMOUTH TUBE CO.**

1209 East 12th Street, Streator, Illinois 61364

Phone: (815) 673-1616 Fax: (815) 672-7343

**TRUST YOUR SOURCE! ACCEPT NO SUBSTITUTIONS!**



## PRODUCT CERTIFICATION

SALES ORDER - LINE / RLS

175629 - 1 / 0

WORK ORDER 023679

PCS/HEAT 0

HEAT NUMBER 616506

MELT SOURCE Benteler Steel & Tube-Germany

SHIP TO

Factory Steel & Metal Supply C  
14020 Oakland Avenue  
Detroit, MI 48203  
USA

CUSTOMER P.O.	CUSTOMER PART	QUANTITY	LADING NO	CERT ID / REV	CERT DATE
3887	SQ-N34035			/	

PART DESCRIPTION SHSQ0750035J300

### Additional Specification(s)

TEST	UNITS	#TESTS	HIGH	LOW	AVERAGE	STD-DEV
Brinell	Brinell	6	253	253	253	0

This test report data is for the heat Chemistry Stated above.

The material in this test report is:

- 1) Drawn in the USA
- 2) Free from Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE), and Mercury contamination.
- 3) NAFTA compliant.

End of Certification

I certify that the results are a true and correct copy of the records prepared and maintained by Plymouth Tube Company, Streator in compliance with the requirements of the cited specification. Chemistry is as reported by the Steel supplier. This test report cannot be reproduced or distributed except in full without the written permission of Plymouth Tube.

*Jamie Deross*  
Quality Assurance



# **MATERIAL RECEIPT INSPECTION FORM**

MATERIAL: M4130NTS 0.750W .035 PO / BATCH NO.: POMB045594  
 DATE: JAN 27 2020 5250794

MATERIAL CERT REC'D: YES  
 QUANTITY RECEIVED: 609 FT  
 QUANTITY INSPECTED: 609 FT  
 QUANTITY REJECTED: 0

THICKNESS ORDERED: .750W .035  
 THICKNESS RECEIVED: .750W .035  
 SHEET SIZE ORDERED: —  
 SHEET SIZE RECEIVED: —

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y <input checked="" type="checkbox"/> N	
CORRECT FINISH	<input checked="" type="checkbox"/> Y N	
CORROSION	Y <input checked="" type="checkbox"/> N	
CORRECT GRAIN DIRECTION	<input checked="" type="checkbox"/> Y N	
CORRECT MATERIAL PER M-DRAWING	<input checked="" type="checkbox"/> Y N	MIL-T-6736
CORRECT THICKNESS	<input checked="" type="checkbox"/> Y N	
PHOTO REQUIRED	Y <input checked="" type="checkbox"/> N	
CORRECT REF # TO LINK CERT	<input checked="" type="checkbox"/> Y N	616506
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="checkbox"/> Y N	
CORRECT M# ON THE MATERIAL	<input checked="" type="checkbox"/> Y N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y <input checked="" type="checkbox"/> N	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y <input checked="" type="checkbox"/> N	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

*testers located in the Quality Office*

<b>QC 18 INSPECTION</b>		<b>ENGINEERING SIGNOFF (if required)</b>	
INSPECTED BY: _____	DAS	SIGNED OFF BY: _____	
DATE: <u>JAN 27 2020</u>	<b>82</b> 9-89	DATE: _____	

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in



Entered: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. \_\_\_\_\_

Route update only ☐

<b>Job:</b> _____ <b>Part No.</b> _____		<b>DISPOSITION</b> Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/>		<b>DEPARTMENT/PROCESS</b> Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Large Fab <input type="checkbox"/> Cross tube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Eng. (Non-AW) <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Engineering <input type="checkbox"/> Water Jet <input type="checkbox"/> Supplier <input type="checkbox"/> Quality <input type="checkbox"/>																															
<b>Date :</b> _____		<b>Sequence #:</b> _____		<b>QTY Affected :</b> _____		<b>MRB (QSI042)</b>																													
<b>Description Work Order Deviation</b>				<b>Disposition</b>																															
				<b>Completed By</b>																															
				<b>Lead hand / Supervisor</b>																															
				<b>QC / QA Coordinator</b>																															
<b>Root Cause</b> Operator <input type="checkbox"/> Manufacturing Process <input type="checkbox"/> Equip/Tooling <input type="checkbox"/> Handling/Presservation <input type="checkbox"/> Material <input type="checkbox"/> Product Improvement <input type="checkbox"/> Process Improvement <input type="checkbox"/> Human Factors <input type="checkbox"/>		<b>FAULT CATEGORY</b> <table border="0"><tr><td><input type="checkbox"/> Pressure/Forced</td><td><input type="checkbox"/> Contamination</td><td><input type="checkbox"/> Power Loss/Surge</td><td><input type="checkbox"/> Positioned Wrong</td></tr><tr><td><input type="checkbox"/> Bending</td><td><input type="checkbox"/> Misaligned/off center</td><td><input type="checkbox"/> Folio/Program</td><td><input type="checkbox"/> Outside Tolerance</td></tr><tr><td><input type="checkbox"/> Crushing</td><td><input type="checkbox"/> BOM/Route</td><td><input type="checkbox"/> Grain Direction</td><td><input type="checkbox"/> Drawing</td></tr><tr><td><input type="checkbox"/> Cracks</td><td><input type="checkbox"/> Broken/Damage/Defect</td><td><input type="checkbox"/> Weld</td><td><input type="checkbox"/> Finish</td></tr><tr><td><input type="checkbox"/> Crimp/Kink/Ripple/Wave/Twist</td><td><input type="checkbox"/> Incomplete/Unclear Instructions</td><td><input type="checkbox"/> Wrong Stock Pulled</td><td><input type="checkbox"/> Part Lost/Missing</td></tr><tr><td><input type="checkbox"/> Marks/Chatter</td><td><input type="checkbox"/> Drill Holes</td><td><input type="checkbox"/> Out of Sequence</td><td><input type="checkbox"/> Misread</td></tr><tr><td><input type="checkbox"/> Mislabeled</td><td><input type="checkbox"/> Fit/Function</td><td><input type="checkbox"/> Off-set/Set-up</td><td></td></tr></table>						<input type="checkbox"/> Pressure/Forced	<input type="checkbox"/> Contamination	<input type="checkbox"/> Power Loss/Surge	<input type="checkbox"/> Positioned Wrong	<input type="checkbox"/> Bending	<input type="checkbox"/> Misaligned/off center	<input type="checkbox"/> Folio/Program	<input type="checkbox"/> Outside Tolerance	<input type="checkbox"/> Crushing	<input type="checkbox"/> BOM/Route	<input type="checkbox"/> Grain Direction	<input type="checkbox"/> Drawing	<input type="checkbox"/> Cracks	<input type="checkbox"/> Broken/Damage/Defect	<input type="checkbox"/> Weld	<input type="checkbox"/> Finish	<input type="checkbox"/> Crimp/Kink/Ripple/Wave/Twist	<input type="checkbox"/> Incomplete/Unclear Instructions	<input type="checkbox"/> Wrong Stock Pulled	<input type="checkbox"/> Part Lost/Missing	<input type="checkbox"/> Marks/Chatter	<input type="checkbox"/> Drill Holes	<input type="checkbox"/> Out of Sequence	<input type="checkbox"/> Misread	<input type="checkbox"/> Mislabeled	<input type="checkbox"/> Fit/Function	<input type="checkbox"/> Off-set/Set-up	
<input type="checkbox"/> Pressure/Forced	<input type="checkbox"/> Contamination	<input type="checkbox"/> Power Loss/Surge	<input type="checkbox"/> Positioned Wrong																																
<input type="checkbox"/> Bending	<input type="checkbox"/> Misaligned/off center	<input type="checkbox"/> Folio/Program	<input type="checkbox"/> Outside Tolerance																																
<input type="checkbox"/> Crushing	<input type="checkbox"/> BOM/Route	<input type="checkbox"/> Grain Direction	<input type="checkbox"/> Drawing																																
<input type="checkbox"/> Cracks	<input type="checkbox"/> Broken/Damage/Defect	<input type="checkbox"/> Weld	<input type="checkbox"/> Finish																																
<input type="checkbox"/> Crimp/Kink/Ripple/Wave/Twist	<input type="checkbox"/> Incomplete/Unclear Instructions	<input type="checkbox"/> Wrong Stock Pulled	<input type="checkbox"/> Part Lost/Missing																																
<input type="checkbox"/> Marks/Chatter	<input type="checkbox"/> Drill Holes	<input type="checkbox"/> Out of Sequence	<input type="checkbox"/> Misread																																
<input type="checkbox"/> Mislabeled	<input type="checkbox"/> Fit/Function	<input type="checkbox"/> Off-set/Set-up																																	
		<b>Other/Details:</b>																																	